

**Listing of the Claims:**

The following is a complete listing of all the claims in the application, with an indication of the status of each:

- 1        1 (Original). A simulation method for simulating a system having a  
2        plurality of circuit modules using software, comprising the steps of:  
3                using an object oriented language;  
4                preparing a plurality of circuit base classes, which describe base  
5        circuit modules as classes, as a library;  
6                describing the circuit modules to be simulated as classes by  
7        inheriting the circuit base classes prepared as the library; and  
8                describing the system to be simulated by combining the circuit  
9        modules described as the classes.
  
- 1        2 (Original). A simulation method according to claim 1, further comprising  
2        the step of describing the system as a class by inheriting the circuit base  
3        classes prepared in the library.
  
- 1        3 (Currently Amended). A simulation method according to claim 1, further  
2        comprising the step of preparing a component class having the properties  
3        of a circuit which contains a circuit operating asynchronously with a clock  
4        signal, and a synchronous module class, having the properties of a circuit  
5        operating synchronously with the clock signal in the library, which is  
6        derived from said component class.
  
- 1        4 (Original). A simulation method according to claim 3, further comprising  
2        the step of preparing a bus class having the properties of a bus, a bus  
3        master class having the properties of a bus master, and a bus slave class  
4        having the properties of a bus slave, as the circuit base class described as a  
5        class derived from the synchronous module class, in the library.

1       5 (Original). A simulation method according to claim 4, further comprising  
2       the step of preparing a bus master interface class, whose base classes are  
3       the synchronous module class, and which has the properties of a bus  
4       master interface, and a bus slave interface class having the properties of a  
5       bus slave interface, as the circuit base class in the library.

1       6 (Original). A simulation method according to claim 3, further comprising  
2       the step of preparing a central processing unit class, whose base class is the  
3       synchronous module class, and which has the properties of a central  
4       processing unit, as the circuit base class in the library.

1       7 (Original). A simulation method according to claim 3, further comprising  
2       the step of preparing a hierarchy class, whose base class is the synchronous  
3       module class, and which has the properties of a hierarchy of a circuit  
4       containing the bus, as the circuit base class in the library.

1       8 (Original). A simulation method according to claim 4, further comprising  
2       the step of preparing a memory class, whose base class is the bus slave  
3       class, and which has the properties of a memory, as the circuit base class in  
4       the library.

1       9. (Previously Presented). A simulating apparatus, using a computer, for  
2       simulating a system having a plurality of circuit modules, said simulation  
3       apparatus comprising:  
4               storage means storing a plurality of circuit base classes, which  
5       describe base circuit modules as classes, as a library;  
6               means accessing the storage means and describing the circuit  
7       modules to be simulated as classes by inheriting the circuit base classes  
8       stored in the library; and

9 means combining the circuit modules described as classes to  
10 describe the system to be simulated.

1 10 (Previously Presented). A computer-readable storage medium for  
2 storing a computer program for executing a simulation method for  
3 simulating a system having a plurality of circuit modules, the computer  
4 program comprising the steps of:  
5 using an object oriented language;  
6 preparing a plurality of circuit base classes, which describe base  
7 circuit modules as classes, as a library;  
8 describing the circuit modules to be simulated as classes by  
9 inheriting the circuit base classes prepared as a library; and  
10 describing the system to be simulated by combining the circuit  
11 modules described as classes.

1 11 (New). A simulating apparatus according to claim 9, wherein the means  
2 combining the circuit modules describes the system to be simulated as a  
3 class by inheriting the circuit base classes prepared in the library.

1 12 (New). A simulating apparatus according to claim 9, wherein the  
2 storage means stores a component class having the properties of a circuit  
3 which contains a circuit operating asynchronously with a clock signal, and  
4 a synchronous module class, having the properties of a circuit operating  
5 synchronously with the clock signal in the library, which is derived from  
6 said component class.

1 13 (New). A simulating apparatus according to claim 12, wherein the  
2 storage means stores a bus class having the properties of a bus, a bus  
3 master class having the properties of a bus master, and a bus slave class  
4 having the properties of a bus slave, as the circuit base class described as a

5 class derived from the synchronous module class, in the library.

1 14 (New). A simulating apparatus according to claim 13, where in the  
2 storage means stores a bus master interface class, whose base classes are  
3 the synchronous module class, and which has the properties of a bus  
4 master interface, and a bus slave interface class having the properties of a  
5 bus slave interface, as the circuit base class in the library.

1 15 (New). A simulating apparatus according to claim 12, wherein the  
2 storage means stores a central processing unit class, whose base class is the  
3 synchronous module class, and which has the properties of a central  
4 processing unit, as the circuit base class in the library.

1 16 (New). A simulating apparatus according to claim 12, wherein the  
2 storage means stores a hierarchy class, whose base class is the synchronous  
3 module class, and which has the properties of a hierarchy of a circuit  
4 containing the bus, as the circuit base class in the library.

1 17 (New). A simulating apparatus according to claim 13, wherein the  
2 storage means stores a memory class, whose base class is the bus slave  
3 class, and which has the properties of a memory, as the circuit base class in  
4 the library.

1 18 (New). A computer-readable storage medium according to claim 10,  
2 wherein the computer program further comprises the step of describing the  
3 system as a class by inheriting the circuit base classes prepared in the  
4 library.

1 19 (New). A computer-readable storage medium according to claim 10,  
2 wherein the computer program further comprises the step of preparing a

3 component class having the properties of a circuit which contains a circuit  
4 operating asynchronously with a clock signal, and a synchronous module  
5 class, having the properties of a circuit operating synchronously with the  
6 clock signal in the library, which is derived from said component class.

1 20 (New). A computer-readable storage medium according to claim 19,  
2 wherein the computer program further comprises the step of preparing a  
3 bus class having the properties of a bus, a bus master class having the  
4 properties of a bus master, and a bus slave class having the properties of a  
5 bus slave, as the circuit base class described as a class derived from the  
6 synchronous module class, in the library.

1 21 (New). A computer-readable storage medium according to claim 20,  
2 wherein the computer program further comprises the step of preparing a  
3 bus master interface class, whose base classes are the synchronous module  
4 class, and which has the properties of a bus master interface, and a bus  
5 slave interface class having the properties of a bus slave interface, as the  
6 circuit base class in the library.

1 22 (New). A computer-readable storage medium according to claim 19,  
2 wherein the computer program further comprises the step of preparing a  
3 central processing unit class, whose base class is the synchronous module  
4 class, and which has the properties of a central processing unit, as the  
5 circuit base class in the library.

1 23 (New). A computer-readable storage medium according to claim 19,  
2 wherein the computer program further comprises the step of preparing a  
3 hierarchy class, whose base class is the synchronous module class, and  
4 which has the properties of a hierarchy of a circuit containing the bus, as  
5 the circuit base class in the library.

- 1       24 (New). A computer-readable storage medium according to claim 20,
- 2       wherein the computer program further comprises the step of preparing a
- 3       memory class, whose base class is the bus slave class, and which has the
- 4       properties of a memory, as the circuit base class in the library.